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Introduction: the diachrony of agreement

e 1e Notions of agreement

Synchronic research has led to many interesting generalizations concerning the architecture of agreement systems. Arguably, the most important contribution has been made by typologically oriented studies (e.g. Corbett 1979, 1991, 2003, 2012; Aikhenvald 2003), which enabled researchers to formulate empirically well-founded generalizations such as the Agreement Hierarchy (Corbett 1979, 1991: 225–241, 2006: 203–237, 2012: 93–99). But agreement phenomena have recently been discovered as interesting research topics within more formal frameworks as well. For instance, valuable insights have been provided by representatives of Lexical Functional Grammar (e.g. Bresnan and Mchombo 1987), Head Driven Phrase Structure Grammar (e.g. Wechsler and Zlatić 2000, 2003), and the generative paradigm (e.g. Baker 2008).

For the sake of clarity, a terminological definition of the term *agreement* and its use in this introductory chapter is in order. In what follows we basically adopt the concepts and the terminology of Corbett (2006: 4–8). Thus, the very basic notion of agreement is co-variance (as per Steele 1978: 610). The terms for the elements that are involved in an agreement relation are well established: *controller* refers to the element that determines the values of a co-varying element, the element that co-varies is called the *target*, and the syntactic environment in which agreement is triggered is called the *domain*. *Feature* refers to the category showing co-variation (e.g. gender, number, or person), and the *value* of a feature is a particular member of that category (e.g. feminine, singular, etc.). Elements that have an impact on agreement, but are not directly involved in co-variation, are called *conditions*. There is no unanimity in the literature as to the categories that should or can be included in the set of agreement features. Here again, we follow the approach of Corbett (2006) and will deal with “canonical” agreement features only, viz., person, gender, and number; agreement in case is thus not dealt with.

2 Agreement and diachrony

Although significant progress in research on agreement systems has been made from a synchronic point of view, a diachronic perspective is still missing in most accounts of agreement (cf. the brief remarks in Corbett 2006: 264–274). This is

regrettable since the interest in language change in general has increased considerably in the last years. One reason for this diachronic renaissance is that language change can provide interesting insights when it comes to assessing the explanatory power of synchronically motivated theoretical concepts (cf. e.g. Bickel et al., this volume). The lack of informed statements on the diachrony of agreement is due to the scarcity of empirical studies in this field. This volume is intended to begin filling this gap by presenting empirically well-founded research dedicated to the understanding of the diachronic development of agreement systems.

In the remainder of this introductory chapter, we will briefly discuss the methodological problems specific to research on the history of agreement systems (section 3). We will then illustrate some changes observed in the diachrony of agreement systems, drawing on our own research and that reported on in the present volume, and thus provide a phenomenology of agreement change (section 4). Finally, the chapter concludes with a short section on the scope of this book (section 5).

3 Methodological issues

Diachronic linguistics requires somewhat different methods than those used in purely synchronic approaches. This applies not only to the problem of sampling data for empirical studies, but also to the reliability of the data. Basically, there are two ways of obtaining diachronic data. For some of the world's languages, older stages are attested in the form of a textual record that can be analyzed in the form of corpus studies (especially prominent in this respect are of course the Indo-European and Semitic language families). However, this is not the case for the majority of the world's languages. There diachronic data can be obtained via comparison of closely related living linguistic systems ("dialects" or closely related languages), as has already been recommended by Harris and Campbell (1995: 12). But also for languages that do have older textual records it makes sense to look at "living" data, since older texts pose certain problems (see below). Thus, beside corpus analyses "comparative" or "variationist" studies can add valuable evidence to diachronic research (they are, in fact, inherently diachronic). In general, scholars use both approaches to obtain diachronically relevant data (corpus-based and comparative), depending on the availability of written records and the varieties attested.

As concerns historical records, they notoriously contain "bad data" in the sense of Labov (1994: 11). In the absence of native speakers, they cannot provide negative evidence, and the textual transmission often leads to a blurred picture

because it is often not clear whether a certain form is original or introduced by a scribe copying or/and adapting the text. In addition, the corpus is all too often quite limited and contains gaps. As Labov (1994: 10) puts it: “Historical documents survive by chance, not by design.” In the remainder of this section, we will focus on two serious problems scholars often have to deal with when analyzing older written sources. The following examples illustrate how cautious we must be when interpreting agreement data from historical records.

3.1 Translation syntax

It is common knowledge that the so-called *committee nouns* (see Corbett 2006: 211), that is, collective nouns, can trigger plural agreement in many languages (cf. the well-known British English example *the committee decide*). As discussed by Birkenes and Sommer (2015) in more detail, committee nouns triggering plural agreement are also attested in both the older stages of German and in Ancient Greek. Sometimes we find coordinated structures of a singular and a plural verb as committee nouns’ agreement targets. In these cases, the committee noun subject triggers singular agreement on the verb of the same clause, but plural agreement in the following coordinated clause. This is illustrated by example (1) from Luther’s Early New High German Bible translation:

- (1) Early New High German (Luther’s Bible translation 1545; Ex 32,6)
Darnach satzt sich das Volck zu essen
 Thereafter sat.SG REFL ART.SG people.SG to eat
vnd zu trincken / vnd stunden auff spielen
 and to drink and stood.PL up play
 ‘and the people sat down to eat and to drink, and rose up to play’ (King James Version)

As a matter of fact, we find exactly the same type in Ancient Greek, as the following parallel example from the Septuagint shows:

- (2) Ancient Greek (Septuagint; Ex 32,6)
kaì ekát^hisen ho laòs p^hageîn kaì
 and sat_down.SG ART.SG people.SG eat and
pieîn kaì anéstēsan paízein
 drink and stood_up.PL play

Indeed, the same pattern is also found in the Vulgate and in the Hebrew original text (see Birkenes and Sommer 2015: 214–215):

- (3) Latin (Vulgate; Ex 32,6)
et sedit populus comedere ac bibere
 and sat.SG people.SG eat and drink
et surrexerunt ludere
 and rose.PL play
- (4) Biblical Hebrew (Ex 32,6)
wa-y-yēšēb hā-'ām lē-'ēkōl wə-šā tō^w
 and-sat.SG the-people.SG to-eat and-drink
wa-y-yāqumū^w lə-šaḥēq
 and-rose.PL to-play

When we examine German and Ancient Greek original texts, this construction hardly appears at all. As argued by Birkenes and Sommer (2015: 216), we thus conclude that this special agreement pattern was simply transmitted with the translation from Hebrew into Greek, from Greek into Latin, and, depending on the text underlying Luther's translation, from Hebrew, Greek, and/or Latin into German. Since this pattern only appears in translated texts, one should speak of translated, not borrowed syntax. Its productivity status within the respective grammatical systems seems doubtful at best.

3.2 Prescriptivism

It is well known that (Standard) Icelandic takes neuter plural forms in gender resolution contexts. For instance, couples and other mixed-gender groups are normally referred to by neuter plural forms. However, in generic contexts and when reference is made to lexical hybrids, prescriptive grammars have demanded use of masculine forms since the 19th century. Þórhallsdóttir (this volume) analyzed 1640 private letters written in the 19th century by writers with little formal education. In opposition to the standard language, neuter forms prevail in these contexts, as illustrated by the following example:

- (5) Icelandic (19th century private letter; cf. Þórhallsdóttir, this volume: 279)
Krakk-ar=nir *mín-ir* *er-u*
 kid-(M).NOM.PL=DEF POSS-NOM.PL.M be[PRS]-3PL
efnileg *og* *heldur* *lagleg*
 promising[NOM.PL.N] and rather pretty[NOM.PL.N]
 ‘My kids are promising and quite pretty’

The masculine plural subject *krakkar* ‘kids’ triggers neuter agreement in the predicative adjectives *efnileg*(-Ø) and *lagleg*(-Ø). If the 19th and 20th century standard had been followed, the masculine plural forms *efnileg-ir* and *lagleg-ir* would have been used. Although the neuter plural agreement was eliminated from the standard by prescriptive activities in the 19th century, it was retained to some extent in spoken non-standard varieties. Scholars dealing with the history of agreement systems, and the history of language in general, need to be aware of prescriptive tendencies and of the selective perception of elites producing the prescriptive norms in question.

4 A phenomenology of change in agreement

In this section, we provide a brief phenomenology of change in agreement systems by using mostly (though not exclusively) historical data collected to a large extent in the context of the Marburg research project and the contributions of the present volume. We will do so by taking into account the concepts of Corbett’s (2006) agreement model outlined above and look at the different elements of agreement with respect to linguistic change.

4.1 Controller

Since agreement is defined as co-variance between a controller and its target(s), it is almost trivial to remark that changes in the controller might lead to changes in the agreement system as a whole. For instance, if a noun (being a potential controller) changes its gender, targets will change their agreement values accordingly. Such a change of noun class (which may or may not be overtly marked on the noun itself, depending on the morphological marking of nominal classes on the nouns themselves in general) means a change in the lexical entry of the noun.

A particularly interesting case in point is the diachronic development of lexical hybrids, i.e. nouns whose formal features may conflict with their seman-

tics, e.g., between (grammatical) gender and (natural) sex of their referents. In what follows we will illustrate that such lexical hybrids are subject to “de-hybridization”, that is, they can become “regular” nouns, and that the opposite process of “hybridization”, that is, of “regular” nouns becoming lexical hybrids, is attested as well.

In several old West Germanic languages (and many modern ones), the word for ‘woman; wife’ (Old High German *wīb*, Old Saxon, Old Frisian and Old English *wīf*) is neuter in terms of grammatical gender. Throughout the history of (written) German, attributes to this noun tend to take neuter forms in agreement relations, whereas anaphoric pronouns mostly, but not exclusively show feminine agreement; in the relative pronoun either gender is attested (cf. Fleischer 2012). This change is thus structured by the Agreement Hierarchy. Figure 1 illustrates the frequency of grammatical and semantic agreement for five different target types. The twelve corpora used for this investigation cover the time span from the early 9th to the 20th century.

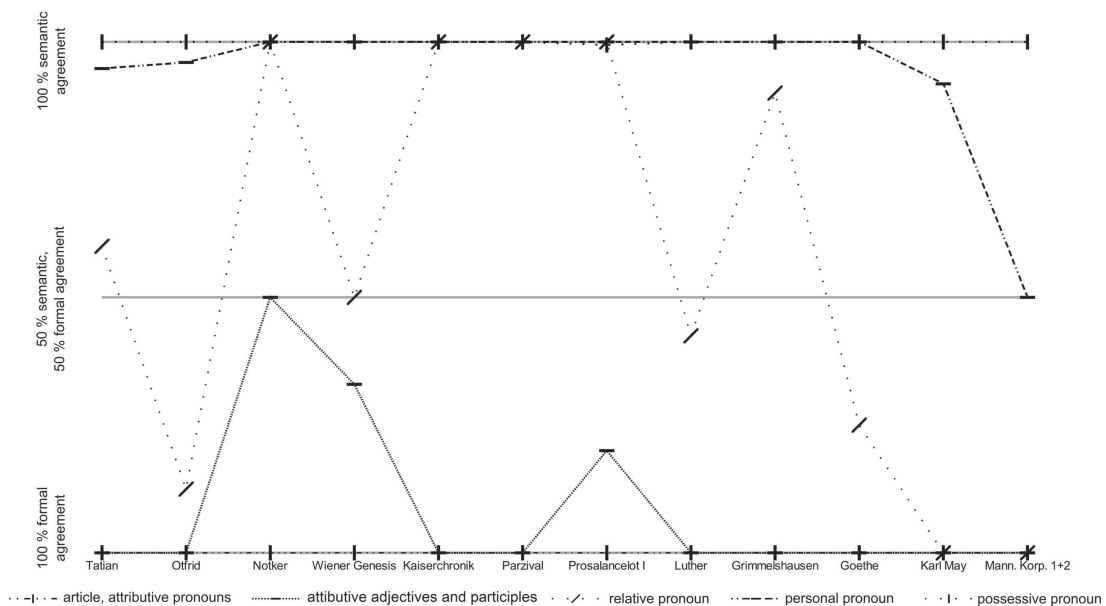


Figure 1: Semantic and grammatical agreement to OHG *wīb*/NHG *Weib* ‘woman; wife’ with five different target types (adapted from: Fleischer 2012: 189)

As argued by Fleischer (2012), from a synchronic point of view, the fact that the individual lines do not cross one another means that the Agreement Hierarchy holds for each single corpus, albeit with different figures. This can be regarded as additional synchronic empirical evidence for the validity of the Agreement Hierar-

chy. In a diachronic perspective, it can easily be seen that, for the time span covered here, there is no single direction of change: while semantic agreement has a broad peak between the corpora of Kaiserchronik (late 12th century) and Prosalancelot I (13th/15th century), with 100 % of possessive, personal, and relative pronouns, it becomes less frequent during the following period, but by no means does it diminish fully. On the other hand, semantic agreement is somewhat less frequent at the beginning of the attested history of German. Thus, we seem to be dealing with a “there and back” change (Corbett 2006: 273) rather than with a change pointing in one direction. However, it is not chaotic, but structured according to the different positions of the Agreement Hierarchy. Crucially, although substantial changes can be observed, the hybrid agreement behavior of Old High German *wīb* is retained continuously, even in its modern reflex, New High German *Weib*.

However, this is not the case in different, closely related, linguistic systems. In some Yiddish varieties as well as in many North Frisian dialects, the noun in question behaves like an ordinary feminine noun. Given the absence of unambiguous formal marking of noun classes on the noun itself in these languages, this behavior can be deduced only from the fact that *all* agreement targets *only* display feminine gender forms. For instance, in the following Yiddish example (taken from the story *In a fargrebter shtot* ‘In a boorish town’, by the Soviet-Yiddish writer Dovid Bergelson [1884–1952], born in Oxrimovo, present-day Ukraine), in addition to the personal pronouns, even the article and the postpositioned possessive pronoun display feminine gender; thus, there is no longer any clue to the former hybridity of this noun, which, as a consequence, has arguably been “de-hybridized”:

- (6) Yiddish (Dovid Bergelson, *In a fargrebter shtot*)
frier shmeykhlt zi azoy tsu mir,
 earlier smiles she so to me
di vayb zayn-e, un zagt:
 DEF:NOM.SG.F wife his-NOM.SG.F and says
“vart, zagt zi, ikh vel forn”
 wait says she I will drive
 ‘earlier she smiled to me, his wife, and says: “Wait, she says, I will drive.”’

Note that in this Yiddish variety the neuter still exists:¹ not only do we find in the same texts instances of neuter articles with non-hybrid neuter nouns such as *dos bukh* ‘the:NOM.SG.N book’, *dos shtetl* ‘the:NOM.SG.N shtetl’ or *dos holts* ‘the:NOM.

¹ Thus, this variety is different from North Eastern Yiddish, where the entire neuter gender has disappeared (see e.g. Herzog 1965: 102). For North Eastern Yiddish, it is of course to be expected

SG.N wood’, but the hybrid agreement behavior of *meydl* ‘girl’ (cf. the discussion of cognate German *das Mädchen* ‘the:NOM.SG.N girl’ in Corbett 1991: 227–228) has also been retained. This is attested by the following example, taken from the same text, where we find the neuter article *dos*, but the feminine anaphoric personal pronoun *zi*, both targets of *meydl*:

- (7) Yiddish (Dovid Bergelson, *In a fargrebter shtot*)
dos meyd iz mit im nit
 DEF:NOM.SG.N girl is with him not
geven bakant, zi hot nor gevolt zen ...
 been known she has only wanted see
 ‘the girl was not known to him, she only wanted to see ...’

In some North Frisian dialects the same phenomenon can be observed. In Old Frisian *wif* is attested with the neuter form of the definite article (but see below). In the modern North Frisian Mooring dialect, the reflex of Old Frisian *wif* is listed as a “regular” feminine used with the feminine article *jü* (instead of neuter *dât*);² compare the following Old Frisian and Mooring examples:

- (8) Old Frisian (Skeltana Riucht XXXVI)
ief thet wif kweth
 if DEF:NOM.SG.N woman says
 ‘if the woman says’
- (9) Mooring (North Frisian dialect; Jörgensen 1978: 12)
jü wüf
 DEF:F woman
 ‘the woman’

Interestingly, we find feminine attributive agreement forms already in Old Frisian, as already mentioned by Jacob Grimm ([1837] 1898, 4: 317) and Richt-

that earlier neuter lexical hybrids denoting female persons have become feminines (not masculines, the other remaining gender), as indicated by Herzog (1965: 106).

² Note that in Mooring, different from some insular North Frisian dialects such as Fering, the neuter is retained as a grammatical category; interestingly, in addition to many neuters such as *dât ääse* ‘food, eating’ there is a neuter lexeme that seems to be related to *wüf*, having a pejorative meaning, namely, *dât wüset* (Jörgensen 1978: 13). If this lexeme, as one would expect, can co-occur with feminine anaphoric pronouns, we are dealing with a retained lexical hybrid, in this case.

hofen (1840: 1147–1148; cf. also Rauch 2007, although she does not quote these early observations). This is illustrated by the following example:

- (10) Old Frisian (Londriucht VI)
bi there wiue
 at DEF:DAT.SG.F woman:DAT.SG
 ‘at the woman’s place’

Judging from the examples provided by Richthofen (1840: 1147–1148), it seems that feminine agreement is frequent in the oblique cases, particularly in the dative. Since strong feminine and neuter nouns (including *wif*) both have a dative singular ending *-e* (cf. Boutkan 2001: 622), this syncretism could be the starting point for the spread of feminine attributive agreement forms.

The Yiddish and North Frisian examples discussed above illustrate that previously hybrid nouns can become “de-hybridized”. The opposite development, “hybridization” of a noun, is attested as well: as argued by Enger (this volume), in present-day Norwegian there seems to be a tendency for lexemes such as *lærer* ‘teacher’, whose grammatical gender is (or used to be?) masculine, to be used now with feminine agreement targets. This is a new development, earlier there was a now obsolete feminine derivation *lærerinne* for denoting a female teacher. If this tendency, as of yet quite recent, solidifies, an originally masculine noun will become a lexical hybrid such as the standard textbook example of the Russian masculine noun *vrač* ‘(medical) doctor’, which can be used to denote female doctors as well (and, accordingly, triggers feminine agreement in some instances; see e.g. Corbett 1983: 30–39, 1991: 231–232, 2006: 210–211). The Norwegian case provides us with the opportunity to observe the process of change in detail.

The Norwegian examples also testify to the development of new hybrids motivated by their lexical semantics starting from the pronominal end of the Agreement Hierarchy. Corbett (this volume) now presents examples where it is the mismatch of form that generates split hybrids. These split hybrids have (like other hybrids) morphological characteristics such as endings that would normally indicate a certain grammatical gender which is in conflict both with their lexical semantics and their assigned grammatical gender, but this conflict is avoided in part of their paradigm by the assignment of morphologically justified agreement. Corbett argues that in split hybrids there can be no question of matches or mismatches prompted by the lexeme’s lexical semantics, which is the same throughout the paradigm, leaving the split unaccounted for. We are led to conclude, then, that the split started from the attributive end of the Agreement Hierarchy by gender assignment according to the inflectional type of the noun in categories where the morphological mismatch was most obvious in order to

obtain alliterative agreement, as seen in Corbett's example from the Nordreisa dialect of North Norwegian:

- (11) Norwegian (cf. Corbett, this volume: 208)

mama-n di:-n
 mum-DEF.SG your-M
 'your mum'

Another structure in which the controller often plays an important role in prompting a change of agreement rules is agreement with conjoined noun phrases. For instance, number resolution triggering plural agreement in the targets is frequent, but the singular also occurs (see Corbett 2006: 168–170). The starting point for change is again the choice of a given language between competing sets of rules, in this case between formal partial agreement (agreement with the nearest conjunct), semantic resolution (agreement with the addition of the conjuncts), and morpho-syntactic resolution (agreement with the combined conjuncts viewed as a single entity, as defined by Dammel, this volume). Each one is illustrated by the following Hittite examples taken from Brosch (this volume):

- (12) Hittite (KUB 56.1+ i 11; cf. Brosch, this volume: 336)

2 LÚ 1 MUNUS *akkanz*
 2 man 1 woman die:PTCP.NOM.SG.C
 'Two men (and) one woman are ("is") dead.'

- (13) Hittite (IBoT 1.36 i 63; cf. Brosch, this volume: 337)

BELUTIM=ya=kan UGULA LIMTI=ya GAL-yaz
 lords=and=LP commander 1000=and big:ABL
katta paiskanta
 down go:IPFV:PRS.3PL.MP
 'Both the lords and the commander of thousand (troops) go down through the main (gate).'

- (14) Hittite (KBo 17.105+ iii 7–8; cf. Brosch, this volume: 342)

ʽan¹da=ma=kan āssuwa miyawa hat¹ta¹nta
 in(to)=CNJ=LP good:N/A.PL.N soft:N/A.PL.N wise:N/A.PL.N
wid[du]
come:IMP.3SG.ACT
 'Good, pleasant, and wise things shall come in.'

Hittite, as analyzed by Brosch (this volume), exhibits a complex system for the application of formal agreement and various resolution rules, such as dependency on gender, number, animacy, and lexical semantics. The stability of this system during all of the attested history of Hittite (350 years) is, however, remarkable.

In contrast, German displays a change of system twice within 700 years. In her detailed investigation, Dammel (this volume) shows that the changes originate in variation depending on the conditions of animacy and word order and are caused by the external development from an oral to a written standard.

4.2 Target

Agreement requires morphology. Hence, the development or disappearance of agreement depends on the development or disappearance of agreement morphology. For instance, it is a well-established fact that pronominal elements provide the most important source for the emergence of verbal agreement morphology. Pronouns may proceed along the established paths of grammaticalization from full pronouns, to clitics, to inflectional morphemes (Givón 1976). The results of this can be observed in both the creation of agreement systems and in the renewal of already existing agreement systems.

As Corbett (2006: 266) notes, it is difficult to provide data illustrating the actual birth of an agreement system where none existed before. He provides the following example from Palu'e, an Austronesian language without any kind of agreement in its more recent history:

(15) Palu'e (Austronesian; Donohue in Corbett 2006: 266)

- a. *ak=pana*
1SG=go
'I went'
- b. *aku pana*
1SG go
'I went'

The bound clitic *ak=* in example (15a) is obviously a reduced form of the personal pronoun *aku* in example (15b). It might develop into an agreement marker (more precisely: a verbal prefix). Currently, however, this is not yet the case: the bound clitic *ak=* cannot combine with the full pronoun *aku*, which means that it still retains its referentiality; cf. example (15c). Therefore, for the time being, it cannot be regarded as an agreement morpheme.

- (15) Palu'e (Austronesian; Donohue in Corbett 2006: 266)

c. *aku ak=pana
 1SG 1SG=go
 'I went'

There are other cases in which an earlier clitic pronoun has proceeded further on its way to becoming an agreement marker. In the following example from a Highest Alemannic dialect spoken in Northern Italy, which has displayed verbal agreement throughout all of its known history, the full second person plural pronoun *ir* can combine with its originally enclitic form *=er* (the same phenomenon can also be observed with other persons in this dialect). In this case we are dealing with the (cyclical?) renewal of an earlier agreement system:

- (16) Highest Alemannic dialect of Gressoney (Vallée d'Aoste, Italy; Zürrer 1999: 320)

ir tie-d=er
 2PL do-2PL=2PL
 'You do.'

As Zürrer (1999: 316–385) discusses in detail, the enclitic subject pronouns of these Alemannic dialects are on the verge of becoming verbal agreement markers (the same phenomenon is also documented for other German varieties, see Zürrer 1999: 365–366). Here, different from Palu'e, the original clitic, having become a verbal suffix, can combine with the full pronoun.

Another case in point is the free, enclitic, and affixal pronominal marking of Old Irish. In this language, phonological and morphological reconstruction has enabled us to track down the relevant categories into pre-history. In his contribution, Griffith (this volume) investigates the correlation of the phonological and morphological clines with the whole syntactic cline for the shift of pronominal arguments to non-arguments (= agreement markers) and offers a diachronic interpretation of the synchronic snapshot of the Old Irish system.

The rise of agreement markers from independent pronouns may end up in entirely unexpected targets, as illustrated by Souag (this volume), presenting previously unreported data from Songhay languages in West Africa. Pronouns that had formerly been part of an afterthought construction like *X (subject NP) ...*, *Pro_X and Y* were reanalyzed as external agreement markers of a comitative: *X ... Agr_X-with Y*. The bipartite comitative is cross-linguistically highly unusual and its development seems to have been induced by contact with Berber, which exhibits the same rare construction.

More than once, scholars have claimed that the structure of a paradigm is affected by universal principles such as Watkins' Law, according to which personal agreement marking develops in such way that third person markers are more likely to exhibit zero endings than first and second person markers (Watkins 1962). Bickel et al. (this volume) also demonstrate the cross-linguistic validity of a tendency towards this distribution of zero markers and propose a plausible path of development. They assume that the distribution of agreement markers is not based on 'natural' or universal principles underlying the structure of paradigms, but rather on the recurring grammaticalization process by which individual agreement markers arise from pronominal controllers and the higher frequency of zero third person pronouns.

Just as cliticization and grammaticalization of originally free to bound morphemes can correlate with agreement morphology, so may simplification and the reduction of morphology lead to the partial or total loss of agreement. For instance, in most Germanic varieties the verb regularly agrees with the subject in terms of person and number. As is well known, there are different types of syncretism in Germanic verbal morphology, in some cases even total. The gray shading in Table 2 indicates syncretisms in five old and modern Germanic languages. If a syncretism is total, agreement disappears altogether from the domain.

Table 2: Verbal syncretisms in Germanic languages: present indicative of the verb 'to lead, to guide'

		OHG	OE	ModE	Norwegian (Bokmål)	Afrikaans
PRES	1.SG	<i>leitu</i>	<i>læde</i>	<i>lead</i>	<i>leder</i>	<i>lei</i>
	2.SG	<i>leitis</i>	<i>lædest</i>	<i>lead</i>	<i>leder</i>	<i>lei</i>
	3.SG	<i>leitit</i>	<i>lædeð</i>	<i>leads</i>	<i>leder</i>	<i>lei</i>
	1.PL	<i>leitemēs</i>	<i>lædað</i>	<i>lead</i>	<i>leder</i>	<i>lei</i>
	2.PL	<i>leitet</i>	<i>lædað</i>	<i>lead</i>	<i>leder</i>	<i>lei</i>
	3.PL	<i>leitent</i>	<i>lædað</i>	<i>lead</i>	<i>leder</i>	<i>lei</i>

As can be seen, there is no subject verb-agreement in Afrikaans or in Norwegian. This is the case for most Mainland Scandinavian varieties and holds true not only for the verb illustrated here, but for the entire system. (In Standard Bokmål not even the highly frequent auxiliaries have preserved varying inflected forms for person and number; in the dialects, however, some number distinctions can still be found.) Interestingly, the development of these syncretisms in Afrikaans and Norwegian is the convergent result of different paths of development.

In the case of Afrikaans, there is no overt morphology (thus, one might indicate the absence of morphology by writing *lei-Ø*). In fact, no verbal morphological distinctions remain at all, with perhaps a single exception. Both the infinitive and the imperative also have the form *lei*, but the past participle is *gelei*. However, this is arguably not a proper verbal form. So we are dealing here with the total, or almost total, destruction of verbal morphology, which obviously has consequences for agreement.

In the case of Norwegian, as indicated by Table 2, we find the overt suffix *-er* in all present tense personal forms, but we do not find this suffix in the infinitive *led-e*, in the imperative *led(-Ø)*, in the preterite *led-te*, or in the past participle *led-t*. Thus, in Norwegian there is still some morphology left, but interestingly (and crucially for agreement) not in the domains of the person and number distinctions. The Norwegian suffix *-er* was originally a second person singular verbal ending that expanded into all present indicative forms, but not beyond. As a consequence, in this case a former verbal personal ending has acquired a new function, namely the indication of present indicative tense. In this case, original agreement morphology is preserved, but acquires new functions outside the domain of agreement, which is a path of development quite different from the one seen in Afrikaans (for a similar example from Old Irish cf. Schumacher 2004: 61–62, with references)

As argued by M. Widmer (this volume) former verbal agreement morphology can also develop into epistemic marking, viz. “assertor’s involvement marking”. Evidence for this comes from two cognate Tibeto-Burman languages, Dolakha Newar and Bunan. In conclusion of this section we can state that, apart from disappearing completely, agreement morphology can also acquire various new functions outside of agreement proper.

4.3 Domains

Change of agreement behavior is also observed with respect to the agreement domain. For instance, in early Old High German texts, the adjective agrees in both the attributive and predicative position. This is illustrated by examples (17a) and (17b), in which the same strong masculine plural form is used:

- (17) Old High German (Tatian 244,17; Tatian 224,6)
- | | | |
|----|-----------------|----------------|
| a. | <i>blint-e</i> | <i>leitida</i> |
| | blind-NOM.PL.M | leaders(M) |
| | ‘blind leaders’ | |

- b. *daz sie sin blint-e*
 that PERS.3PL.M be:3PL.PRES.SUBJ blind-M.PL
 ‘that they (M) be blind’

The loss of agreement in the predicative adjective began quite early in the history of German. Even in the earliest Old High German texts not all predicative adjectives are inflected, and in Late Old High German it is only a small minority (cf. Fleischer 2007). The result of this development can be seen in New High German. Here, although adjectives are still morphologically sensitive to case, number, and gender (gender distinctions were lost in the plural though, but remain intact in the singular; cf. section 4.4.1), the inflected forms only appear in the attributive domain, while there is no longer any overt agreement morphology in the predicative adjective. The following New High German examples, imitating their Old High German equivalents, illustrate this.

(18) New High German

- a. *blind-e Führer*
 blind-NOM.PL leaders (M)
 ‘blind leaders’
- b. New High German
dass sie blind-Ø seien
 that PERS.3PL blind be:3PL.PRES.SUBJ
 ‘that they be blind’

In summary, agreement of adjectival targets was lost in the predicative domain, but not in the attributive domain. Note that this change cannot have happened as a consequence of morphological syncretism, since the endings themselves have not been lost.

A different effect concerning the domains can be seen in Neo-Hittite. In this language, canonical agreement operates throughout the domain of the clause (with the famous exception of the *sk^hêma attikón*, see section 4.5 below). Both controllers and targets are marked overtly for number. Only the class of neuter nouns in *-r-* and *-l-* makes no distinction between the nominative/accusative singular and plural, neither of which displays an overt morpheme. However, there is an incipient change to be observed in which they acquire a new overt ending *-i* in the plural (for an analysis and an interpretation of the data see Rieken 2012[2014]). The interesting fact about the use of these endings is that they are used in contexts where there is already another overt marking of the plural on at least one target within the same clause. In these cases the lack of overt marking

and the formal asymmetry of the system were particularly obvious and were remedied within the domain of the clause by the use of the new ending. In the following example the controller *arkuwar* with zero-ending has been replaced with the new form *arkuwarr-i*, which has *-i* as an overt plural marker:

- (19) Hittite (KUB 6.45 I 26–27, 13th century B.C.)
nu=mu *kē* *arkuwarr-i*^{Hl.A}
 CNJ=PERS.1SG DEM.NOM/ACC.PL.N prayer(N)-NOM/ACC.PL
ištamašten
 listen:2PL.IMP
 ‘And listen to these prayers of mine!’

On the other hand, in an older stage of the same language, agreement across the boundaries of the clause domain is reduced by the elimination of formal number agreement between the quantifier *humant-* ‘all, every’ and its plural controller in a preceding clause. Instead, the singular is used as a default (see Rieken and Widmer 2014). Both of these changes in the Hittite agreement system, which was otherwise remarkably stable, make the clause domain more important for agreement.

4.4 Values and features: increase and decrease, addition and deletion

Change in agreement systems can be due to the increase and decrease of values in an established feature system and to the addition or deletion of certain features altogether. We will first discuss cases of value reduction and feature deletion and then proceed to the opposite processes.

4.4.1 Value reduction and feature deletion

Agreement systems may change because the values of the features participating in an agreement relation change. An interesting example is provided by gender distinctions in the plural and by gender resolution in Germanic. Most of the older Germanic languages displayed a three-way gender distinction in the pronominal and adjectival inflections, not only in the singular, but also in the plural (this is still the case in modern Icelandic and Faroese). Compare the relevant forms of early 9th century Old High German in Table 3:

Table 3: Plural gender distinctions in Old High German (Braune and Reiffenstein 2004: 243, 247, 220)

	masc.	neut.	fem.
personal pronoun	<i>sie</i>	<i>siu</i>	<i>sio</i>
demonstrative/relative pronoun	<i>die</i>	<i>diu</i>	<i>dio</i>
strong adjective	<i>blinte</i>	<i>blint(i)u</i>	<i>blinto</i>

The plural gender distinctions of this system were gradually given up during the history of German (see Fleischer 2007: 291–293). First, masculine and feminine forms merged (more precisely, the masculine form spread to feminine contexts; examples for the personal pronoun can be found as early as in the second half of the 9th century, the demonstrative pronoun followed somewhat later), yielding a two-way distinction of masculine/feminine vs. neuter. Eventually, this distinction was given up as well, leading to a system without gender distinction in the plural, see Table 4 for the personal pronoun:

Table 4: Development of gender distinctions in the German plural pronominal system (3rd plural personal pronoun)

	masc.	fem.	neuter
stage I: three-way distinction	<i>sie</i>	<i>sio</i>	<i>siu</i>
stage II: two-way distinction	<i>sie</i>		<i>siu</i>
stage III: no distinction	<i>sie</i>		

The three morphological systems illustrated above provide interesting constructions in gender resolution contexts. In stage I (the oldest stage of Germanic), the co-ordination of a masculine and a feminine noun is usually resolved by the neuter plural (Behaghel 1928: 39). In stage II, after the merger of the masculine and feminine plural, there are examples where the masculine/feminine form appears in what used to be a gender resolution context; see the following example from late Old High German (10th/11th century), in which a personal pronoun (and, agreeing with it, a predicative adjective) appears in the masculine/feminine form:

- (20) Late Old High German (Notker, Psalter 77, 13–14; Fleischer 2007: 298)

prénne mine glúste unde mîne gedáncha
 burn my lusts(F) and my thoughts(M)
daz sîe únreht-e ne-sîn
 that they(M/F) unright-M/F NEG-be:3PL:SUBJ
 ‘burn my lusts and my thoughts that they be not unrightful’

With the value reduction in the plural gender system, the gender resolution context no longer requires a special gender resolution form because the masculine/feminine form can be used. As a consequence, the problem for the earlier morphological system posed by the gender resolution context has disappeared.³

In stage III, finally, with the total disappearance of the gender distinction in the plural, the gender resolution contexts disappear completely.

4.4.2 Value addition, feature increase

Opposite developments such as the addition of values of already existing features or the introduction of new features are also attested. One example of value

³ Interestingly though, there can still be found neuter plural gender resolution forms referring to a masculine+feminine conjunct in stage II, the morphological merger of masculine and feminine plural notwithstanding. In the following example, the nouns *spîse* ‘food’ (feminine) and *slâf* ‘sleep’ (masculine) are referred to by the neuter plural form of the demonstrative pronoun.

- (i) Middle High German (Iwein 4818–4819; quoted from Paul 2007: 384)

guot spîse und dar nâch sanfer slâf
 good food(F) and thereafter gentle sleep(M)
diu wâren im bereit
 DEM:NOM.PL.N were him ready
 ‘good food and gentle sleep thereafter, they were ready for him’

This is an interesting example to illustrate that gender resolution forms can persist even if there is no formal need for a special resolution form (it would be worth discussing whether we are dealing with “junk” in the sense of Lass 1990 here). Actually, there are even examples in which the neuter forms are used in cases of agreement with the co-ordination of the nouns of the same (non-neuter) gender, as can be seen in the following Old High German example where two masculine plural nouns control a neuter plural form in the predicative adjective:

- (ii) Old High German (Tatian 205, 17; Fleischer 2007: 298)

mîne ferri Inti paston sint arslagan-u
 my oxen(M) and fatlings(M) are slain-NOM.PL.N
 ‘my oxen and my fatlings are killed’ (Matthew 22,4)

As these intriguing examples show, further research is needed here.

addition is found in adjectival agreement in Ancient Greek. Here, many adjectives display a three-way morphological gender contrast (e.g. masculine *ákr-os*, feminine *ákr-a*, neuter *ákr-on* ‘highest, topmost’). However, a subset of (mostly compound) adjectives lacks a formal contrast for masculine and feminine (e.g. masculine/feminine *bárbar-os*, neuter *bárbar-on* ‘strange, foreign’). In Ancient Greek, the number of distinct gender values in this target class was already sporadically increased by introducing a morphologically distinct form *-a/-ē* for the feminine gender by analogy with the common pattern. Over time, the two-way gender distinction of Ancient Greek in this particular subclass of adjectives was replaced with a three-way contrast by means of a systematic addition of a distinct expression for the feminine gender (Horrocks 2010: 289–290). Thus, a distinction between masculine and feminine was newly introduced, providing an example of the addition of a new distinct value to an already existing feature.

Furthermore, there are examples of the introduction of new features into particular target classes where they did not exist before. In Indo-European languages the canonical feature “gender” is typically realized in nominal targets such as pronominals and adjectives, but may also spread to other target types. One such development in recent times is reported for dialectal Italian by Loporcaro (this volume): here, gender agreement has spread to the verb. This is illustrated by the following example, in which gender agreement is not only found on the participle, but also on the auxiliary:

- (21) Italian, dialect of Ripatransone, province of Ascoli Piceno, Marche (Loporcaro, this volume: 106)
- | | | |
|--------------------|-----------------|---------------|
| <i>noja</i> | <i>s-em-i</i> | <i>dat-i</i> |
| 1PL | be.PRS-1PL-M.PL | give:PTP-M.PL |
| ‘we(M) have given’ | | |

In example (21) the finite auxiliary verb *s-em-i* agrees with the subject not only in number and person (*-em-* first person plural), but also in gender (*-i* masculine plural). This kind of gender agreement is confined to periphrastic perfective constructions, where the past participle (*dat-i*) could function as a starting point for the development. In this construction, then, gender agreement has spread to verbal targets, which are not specified for this feature elsewhere.

Another example of the introduction of a new feature onto a particular target is discussed by Jerro and Wechsler (this volume): in Kinyarwanda, a Bantu language, the feature ‘person’ was introduced into quantifiers, where it had not existed before. The following example illustrates the person agreement for the quantifier *ese* ‘all’ with the second person plural subject pronoun *mwe*.

- (22) Kinyarwanda (Bantu; Jerro and Wechsler, this volume: 148)
 (Mwe) *mw-ese mw-agi-ye ku i-duka*
 2PL 2PL-all 2PL-PST.go-PERF to CL5-store
 ‘All of you went to the store.’

4.5 Conditions

Finally, the conditions of an agreement relation may change. For instance, in Ancient Greek, a language known for its highly canonical agreement system, neuter plural subjects normally fail to trigger plural agreement on the verb, as illustrated by example (23). This construction is known as *sk^hêma attikón* in traditional grammar (see, for example, Cooper 1998: 1015–1016). But it is not difficult to find clauses where, contrary to the *sk^hêma attikón*, the verb agrees with its neuter plural subject, as shown by example (24) taken from the same author:

- (23) Attic Greek (Aristotle *Anal. post.* 98b 36)
tà déndra p^hyllorreî
 DEF:NOM.PL.N tree-NOM.PL.N shed_leaves:3SG
 ‘the trees shed their leaves’
- (24) Attic Greek (Aristotle *Rh.* 1408b 25)
prolambánousi tà paidía
 catch_up:3PL DEF:NOM.PL.N child-NOM.PL.N
 ‘the children catch up’

The variation observed here between the plural and singular agreement of a verb with its neuter plural subject can, as a matter of fact, be shown to be influenced by the degree of animacy of the subject referent: the higher its degree of animacy, the more likely the verbal target will have a plural form. This can be seen in Table 5, which illustrates the frequency of singular and plural agreement in three semantic groups with differing degrees of animacy. Plural agreement is shown to be most frequent for the two nouns highest on the animacy scale, i.e. *tékna/paidía* ‘children’. The opposite is the case for the inanimates, i.e. *p^hýlla* ‘leaves’ and *déndra* ‘trees’. Therefore, the Animacy Hierarchy (see, e.g., Silverstein 1976, Bossong 1998) can be considered a crucial factor for the frequency of plural agreement:

Table 5: Agreement of verbs with selected neuter plural subjects in Attic and Koiné Greek (500 BCE–300 CE)

	<i>tékna</i> ‘children’ <i>paidía</i> ‘children’	<i>zōia</i> ‘living beings’ <i>thēría</i> ‘animals’	<i>p^hýlla</i> ‘leaves’ <i>déndra</i> ‘trees’
Sg. agreement	204 (77.9 %)	435 (86.5 %)	417 (97.4 %)
Pl. agreement	58 (22.1 %)	68 (13.5 %)	11 (2.6 %)

The way in which a system changes may be closely related to the conditions under which variation arose in the first place. As has been discussed above, in Attic and Koiné Greek the verbal agreement of neuter plural subjects partly depends on referential properties of the controller: neuter subjects with human referents are much more prone to trigger plural agreement on the verb than subjects with non-human referents. In Table 6, the frequency of plural agreement is indicated for three different periods.

Table 6: Plural agreement of verbs with selected neuter plural subjects in Attic and Koiné Greek in three periods

	<i>tékna</i> ‘children’ <i>paidía</i> ‘children’	<i>zōia</i> ‘liv. beings’ <i>thēría</i> ‘animals’	<i>p^hýlla</i> ‘leaves’ <i>déndra</i> ‘trees’
500BCE–250BCE	30.8 %	17.7 %	2.2 %
250BCE–50CE	29.6 %	11.6 %	0.4 %
50CE–300CE	13.3 %	9.8 %	6.4 %

Plural agreement triggered by animate nouns was most frequent in the earliest period, but the impact of animacy decreased considerably over time, so that the difference between the three types of controllers nearly levels out in the third period.

More generally speaking, the trend toward singular agreement of the *sk^hêma attikón*-type can be interpreted as a loss of the impact of the controller’s semantic properties on agreement behavior, while the formal rules of the grammaticalized *sk^hêma attikón* win out. The role of the conditions is thus reduced.⁴

Conversely, when formal agreement loses its dominant role, conditions seem to gain more importance for the realization of agreement rules. De Vos (this

⁴ Note that in Modern Greek plural verb agreement for neuter plural nouns is the only option (Holton, Mackridge and Philippaki-Warbuton 2012: 608–609), while the variation caused by differences in animacy has been given up entirely.

volume) reports that formal agreement of gender-marked personal pronouns is being lost rapidly in Southern Dutch dialects with neuter pronouns developing as the default. However, during this on-going process, the discourse salience of the controller exerts influence on the use of formal agreement on the pronominal target. Two factors contributing to discourse salience have been shown to be relevant, viz. syntactic prominence in terms of subjecthood and semantic prominence in terms of verbal actionality. Thus, a controller in subject position triggers formal agreement on a target pronoun by a higher percentage than a controller in object position. Similarly, for controllers being subject of clauses with action verbs the likelihood of formal agreement on target pronouns is significantly higher than, for instance, for controllers in subject position of clauses with copular verbs.

As a tentative conclusion we can state that the examples discussed here indicate that there is a correlation between the dynamics of the change of a given system and the importance of agreement conditions.

5 The scope of this book

The present volume contains three thematically defined parts – verbal and adpositional agreement, (pro-)nominal agreement, and mismatch constellations and resolution contexts. In the section on verbal and adpositional agreement, subject-verb agreement figures prominently, but a different, typologically rare, type of agreement is also taken into account (see the contribution by Souag). In the contributions dealing with (pro-)nominal agreement, different nominal targets such as adjectives and pronouns are analyzed. The interaction with morphological changes motivated outside the architecture of the agreement system figures prominently here. The parts on verbal and (pro-)nominal agreement cover what might be labeled the core areas of agreement. In the third part papers treating mismatch constellations and resolution contexts are united; it is an especially interesting question whether such contexts, intrinsically unstable as they are, can be made responsible for the initial stages of change in agreement systems as a whole.

The contributors to this volume explore a wide range of research topics. They focus on problems of methodology (Bickel et al.), questions of register and prescriptive activities (Þórhallsdóttir), the functional shift of agreement markers (M. Widmer, Nübling), the spread of agreement morphology to new targets (Loporcaro, Jerro and Wechsler, Souag), the disappearance of agreement in sub-systems (De Vos), the observation of an incipient change (Enger), the grammaticalization cline (Griffith), the agreement hierarchy (Brosch), the distinction of and switch

between various types of agreement such as formal/morpho-syntactic, semantic, referential, and pragmatic agreement (Dammel, Nübling), and the emergence of split agreement (Corbett).

The various problems are tackled either from the controller point of view (resolution contexts: Dammel, Brosch, Þórhallsdóttir; lexical hybrids: Corbett, Enger; person names: Nübling; pronouns: Griffith) or from the target side (verbal agreement: Bickel, M. Widmer, Loporcaro; pronominal agreement: De Vos; quantifier agreement: Jerro and Wechsler; comitative agreement: Souag).

The kind of data sampled for the papers of the present volume varies: historical data collected by analysis of textual records serves as the empirical basis in the papers by Brosch, Dammel, Griffith, and Þórhallsdóttir. Data drawn from field work and/or questionnaire surveys is analyzed in the papers of Enger, Nübling, Souag and M. Widmer. Reference grammars, text collections, and/or samples are used by Corbett, Bickel et al., De Vos, Loporcaro, Souag and Jerro and Wechsler.

The languages treated range from Germanic (Early New High German and New High German: Dammel; High German dialects: Nübling; Dutch dialects: De Vos; Norwegian [present-day spoken Bokmål]: Enger; 19th century and present-day Icelandic: Þórhallsdóttir), Romance (Italian dialects: Loporcaro), and Celtic (Old Irish: Griffith), to less well researched language families such as Berber (Souag), Bantu (Jerro and Wechsler), and Tibeto-Burman (M. Widmer), while other papers derive their generalizations from large, areally and/or genetically balanced samples (Bickel et al., Corbett).

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References

- Aikhenvald, Alexandra. 2003. *Classifiers. A typology of noun categorization devices*. Oxford: Oxford University Press.
- Baker, Mark C. 2008. *The syntax of agreement and concord*. Cambridge: Cambridge University Press.

- Behaghel, Otto. 1928. *Deutsche Syntax: eine geschichtliche Darstellung. Band III: die Satzgebilde*. Heidelberg: Winter.
- Birkenes, Magnus Breder & Florian Sommer. 2015. The agreement of collective nouns in the history of Ancient Greek and German. In: Chiara Gianollo, Agnes Jäger & Doris Penka (eds.), *Language change at the syntax-semantics interface*, 183–221. Berlin & Boston: De Gruyter Mouton.
- Bossong, Georg. 1998. Le marquage différentiel de l'objet dans les langues de l'Europe. In: Jack Feuillet (ed.), *Actance et valence dans les langues de l'Europe*, 193–258. Berlin & New York: Mouton de Gruyter.
- Boutkan, Dirk F. H. 2001. Morphology of Old Frisian. In: Horst Haider Munske (ed.), *Handbuch des Friesischen/Handbook of Frisian Studies*, 620–626. Tübingen: Niemeyer.
- Braune, Wilhelm & Ingo Reiffenstein. 2004. *Althochdeutsche Grammatik I: Laut- und Formenlehre*. 15. Auflage bearbeitet von Ingo Reiffenstein. Tübingen: Niemeyer.
- Bresnan, Joan & Sam Mchombo. 1987. Topic, pronoun, and agreement in Chichewa. *Language* 79. 741–782.
- Cooper, Guy L. 1998. *Attic Greek prose syntax*. Volume 2. Ann Arbor: University of Michigan Press.
- Corbett, Greville G. 1979. The Agreement Hierarchy. *Journal of Linguistics* 15. 203–224.
- Corbett, Greville G. 1983. *Hierarchies, targets and controllers: agreement patterns in Slavic*. London: Croom Helm.
- Corbett, Greville G. 1991. *Gender*. Cambridge: Cambridge University Press.
- Corbett, Greville G. 2006. *Agreement*. Cambridge: Cambridge University Press.
- Corbett, Greville G. 2012. *Features*. Cambridge: Cambridge University Press.
- Fleischer, Jürg. 2007. Das prädikative Adjektiv und Partizip im Althochdeutschen und Altniederdeutschen. *Sprachwissenschaft* 32. 279–348.
- Fleischer, Jürg. 2012. Grammatische und semantische Kongruenz in der Geschichte des Deutschen: eine diachrone Studie zu den Kongruenzformen von ahd. *wīb*, nhd. *Weib*. *Beiträge zur Geschichte der deutschen Sprache und Literatur* 134. 163–203.
- Grimm, Jacob. [1837] 1898: *Deutsche Grammatik* 4. Herausgegeben von Gustav Röthe. Gütersloh [Reprint 1967 Hildesheim: Olms.]
- Harris, Alice C. & Lyle Campbell. 1995. *Historical syntax in cross-linguistic perspective*. Cambridge: Cambridge University Press.
- Herzog, Marvin I. 1965. *The Yiddish language in Northern Poland*. Bloomington: Indiana University & The Hague: Mouton.
- Givón, Talmy. 1976. Topic, pronoun and grammatical agreement. In: Charles N. Li (ed.), *Subject and topic*, 149–188. Amsterdam: Benjamins.
- Holton, David, Peter Mackridge & Irene Philippaki-Warbuton. 2012. *Greek: a comprehensive grammar of the Modern Language*. 2nd ed. London: Routledge.
- Horrocks, Geoffrey. 2010. *Greek: a history of the language and its speakers*. Chichester: Wiley-Blackwell.
- Jörgensen, V. Tams. 1978. *Kort språkeliir foon dât mooringer frasch* [Short grammar of Mooring Frisian]. 4. aplååge. Bräist: Noordfriisk Instituut.
- Labov, William. 1994. *Principles of linguistic change. Volume 1: internal Factors*. Oxford: Blackwell.
- Lass, Roger. 1990. How to do things with junk: exaptation in language evolution. *Journal of Linguistics* 26. 79–102.

- Paul, Hermann. 2007. *Mittelhochdeutsche Grammatik*. 25. Auflage, neu bearbeitet von Thomas Klein, Hans-Joachim Solms und Klaus-Peter Wegera, mit einer Syntax von Ingeborg Schröbler, neubearbeitet und erweitert von Heinz-Peter Prell. Tübingen: Niemeyer.
- Rauch, Irmengard. 2007. Gender semiotics, Anglo-Frisian *wif*, and Old Frisian noun gender. In: Rolf H. Bremmer Jr., Stephen Laker & Oebele Vries (eds.), *Advances in Old Frisian philology*, 357–366. Amsterdam: Rodopi.
- Richthofen, Karl. 1840. *Altfriesisches Wörterbuch*. Göttingen: Diederichs.
- Rieken, Elisabeth. 2012[2014]. Der Nom.-Akk. Pl. n. auf *-i* im Hethitischen: zu den Mechanismen der Ausbreitung von Kongruenzsystemen. *Historische Sprachforschung* 125, 285–294.
- Rieken, Elisabeth & Paul Widmer. 2014. Kongruiert *alles*? – Zu den Kongruenzmustern des Pronominaladjektivs in der Bedeutung ‘all, jeder, ganz’ im Griechischen und Hethitischen. In: Norbert Oettinger & Thomas Steer (eds.), *Das Nomen im Indogermanischen. Morphologie, Substantiv vs. Adjektiv, Kollektivum*, 325–359. Wiesbaden: Reichert.
- Silverstein, Michael. 1976. Hierarchy of features and ergativity. In: R. M. W. Dixon (ed.), *Grammatical categories in Australian languages*, 112–171. Canberra: Australian Institute of Aboriginal Studies.
- Steele, Susan. 1978. Word order variation: a typological study. In: Joseph H. Greenberg, Charles A. Ferguson & Edith Moravcsik (eds.), *Universals of human language IV: syntax*, 585–623. Stanford: Stanford University Press.
- Schumacher, Stefan. 2004. *Die keltischen Primärverben*. Innsbruck: Institut für Sprachen u. Literaturen.
- Watkins, Calvert. 1962. *Indo-European origins of the Celtic verb. Volume I: the sigmatic aorist*. Dublin: Institute for Advanced Studies.
- Wechsler, Stephen & Larisa Zlatić. 2000. A theory of agreement and its application to Serbo-Croatian. *Language* 76: 799–832.
- Wechsler, Stephen & Larisa Zlatić. 2003. *The many faces of agreement*. Stanford, Calif.: CSLI Publications.
- Zürner, Peter. 1999. *Sprachinseldialekte*. Aarau: Sauerländer.